

**LISTING OF CLAIMS**

1. (Currently Amended) A travelling field machine with a stator (10) and a rotor which are separated by an air gap and each of which comprises at least one stator coil (14) or one rotor coil, respectively, wherein [[-]] the stator (10) or the rotor, respectively, comprising:

a soft magnetic iron body with a stator back (11) or a rotor back, respectively, in which spaced grooves (16) are formed, generating teeth (18), and [[-]] in each of the grooves (16) several conductor bars (20) of the stator coil (14) or the rotor coil, respectively, are arranged in series comprising end connectors (22) arranged at the faces of the stator (10) or the rotor, respectively, which connect the conductor bars (20) extending across several grooves (16), wherein [[-]] the conductor bars (20a, 20b) are arranged in a neighbouring relationship in each of the grooves (16), comprising conductor portions of different length projecting beyond the faces of the stator (10) or rotor, respectively, and [[-]] the end connectors (22) are at least partially arranged layered in tiers in the axial direction at the faces of the stator (10) or the rotor, respectively.

2. (Currently Amended) The travelling field machine according to Claim 1, wherein [[-]] the end connectors (22) are joined at both of their ~~end portions~~ ends with the ends (26) of the conductor bars (20) by ~~means of~~ transverse portions (28).

3. (Currently Amended) The travelling field machine according to Claim 2, wherein [[-]] the transverse portions (28) at the ~~two end portions~~ ends of the end

connectors (22) to the respective ends (26) of the conductor bars (20) are of different lengths and/or are angled under different angles.

4. (Currently Amended) The travelling field machine according to Claim 1, wherein [[-]] the conductor bars (20) have a connecting area each at their ends, which matches with corresponding portions at the end connectors (22) for a mechanical and electrical connection.

5. (Currently Amended) The travelling field machine according to Claim 4, wherein [[-]] the connecting areas at the ends of the conductor bars (20) are joined and/or welded or brazed with correspondingly shaped recesses (28a) of the transverse portions (28).

6. (Currently Amended) The travelling field machine according to Claim 5, wherein [[-]] the ~~end portions~~ ends of the end connectors are integrally joined with the end portions of the conductor bar by laser welding.

7. (Currently Amended) The travelling field machine according to Claim 1, wherein [[-]] the grooves taper or expand towards an air gap between the stator and the rotor, and [[-]] the conductor bars arranged in the grooves, depending on their position in the groove comprise a width which is at least partially adapted to the groove width.

8. (Currently Amended) The travelling field machine according to Claim 1, wherein [[-]] at least at one of the ~~two~~ faces of the stator the ~~end connectors~~ are

arranged in the direction of the stator back and in the direction of the air gap between the stator and the rotor, with [[-]] the length of the conductor bars is increasing both from the stator back and the air gap between stator and rotor towards the centre of the grooves.

9. (New) A stator for an electrical machine, said stator comprising:

a body including a back and first and second end faces, said body further including spaced apart grooves extending between the first and second end faces, said grooves having an open side opposite to the back;

a plurality of conductor bars positioned in and extending through the grooves so that opposite ends of the conductor bars extend outside of the body, wherein conductor bars in each groove have different lengths; and

a plurality of end connectors electrically connecting the ends of predetermined conductor bars so that the different lengths of the conductor bars cause the end connectors to form a layered configuration and combine with the conductor bars to provide a stator coil.

10. (New) The stator according to claim 9 wherein the plurality of end connectors are U-shaped members including a center portion connecting opposing leg portions.

11. (New) The stator according to claim 10 wherein one leg portion of each end connector is longer than the other leg portion of the end connector so as to provide

the layered configuration and electrically connect the proper conductor bars to form the stator coil.

12. (New) The stator according to claim 10 wherein the plurality of end connectors have a rectangular configuration.

13. (New) The stator according to claim 9 wherein the end connectors include a recess at opposite ends of the end connectors through which ends of the conductor bars extend to connect the end connectors to the conductor bars.

14. (New) The stator according to claim 13 wherein the conductor bars have a square cross-sectional configuration and the recesses are square recesses.

15. (New) The stator according to claim 13 wherein the ends of the conductor bars are welded, blazed or laser welded to the recesses.

16. (New) The stator according to claim 9 wherein the grooves have a tapered shape such that they expand from the back of the body towards the open side of the body.

17. (New) The stator for an electrical machine, said stator comprising:  
a magnetic iron body including a back and first and second end faces,  
said body further including spaced apart grooves defining teeth therebetween where the

grooves extend between the first and second end faces, said grooves having an open side opposite to the back;

a plurality of conductor bars having a square cross-sectional configuration positioned in and extending through the grooves so that opposite ends of the conductor bars extend outside of the body, wherein the conductor bars in each groove have different lengths and the lengths of the conductor bars get progressively longer from the back of the body towards the open side of the body; and

a plurality of end connectors electrically connecting the ends of predetermined conductor bars, said end connectors being rectangular and U-shaped members including a center portion connecting opposing leg portions, wherein the leg portions include a recess for accepting ends of the conductor bars, wherein the different lengths of the conductor bars cause the end connectors to form a layered configuration and combine with the conductor bars to provide a stator coil.

18. (New) The stator according to claim 17 wherein one leg portion of each end connector is longer than the other leg portion of the end connector.

19. (New) The stator according to claim 17 wherein the ends of the conductor bars are welded, blazed or laser welded to the recesses.

20. (New) The stator according to claim 17 wherein the grooves have a tapered shape such that they expand from the back of the body towards the open side of the body.